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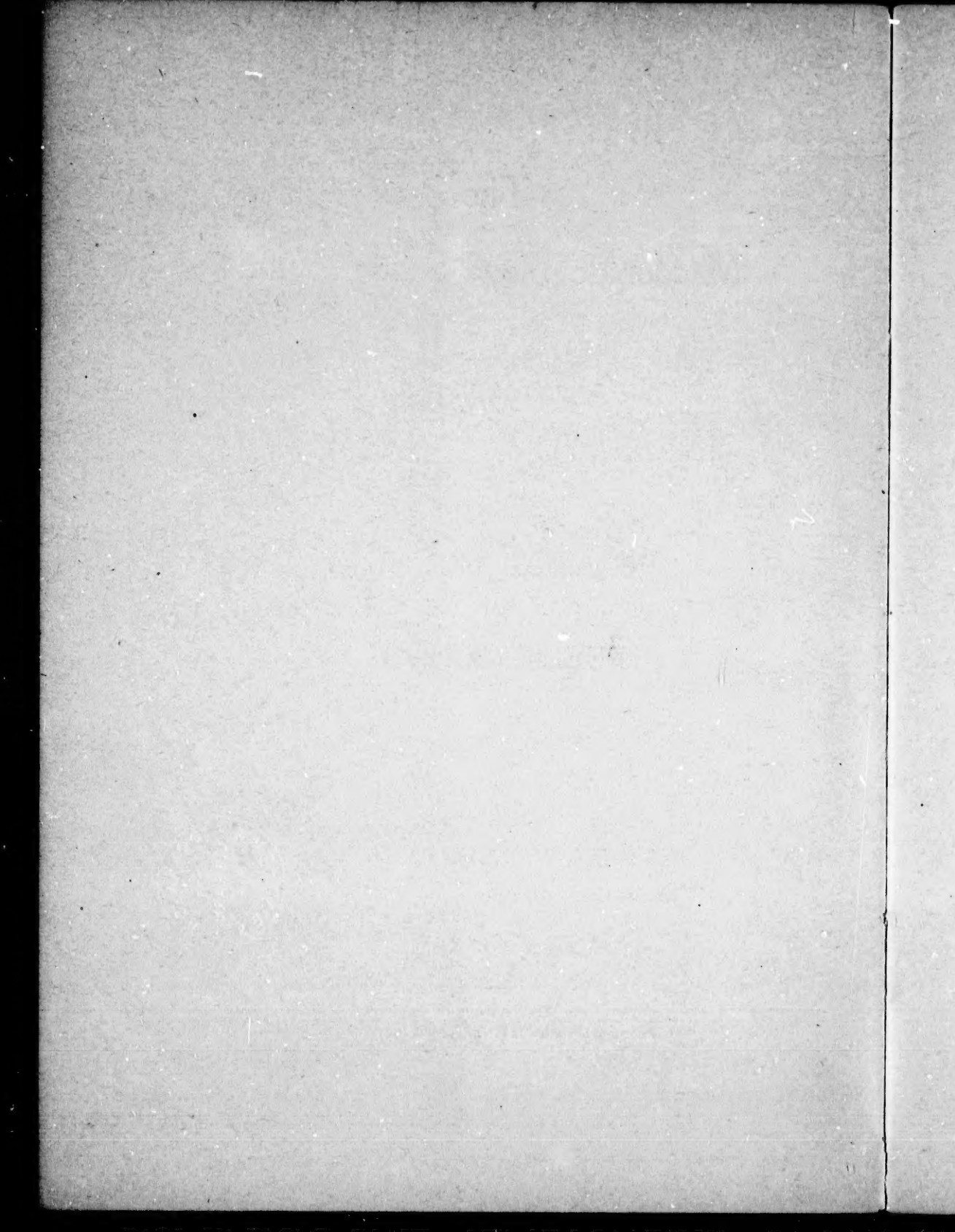
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The
Macdonald Sloyd School Fund

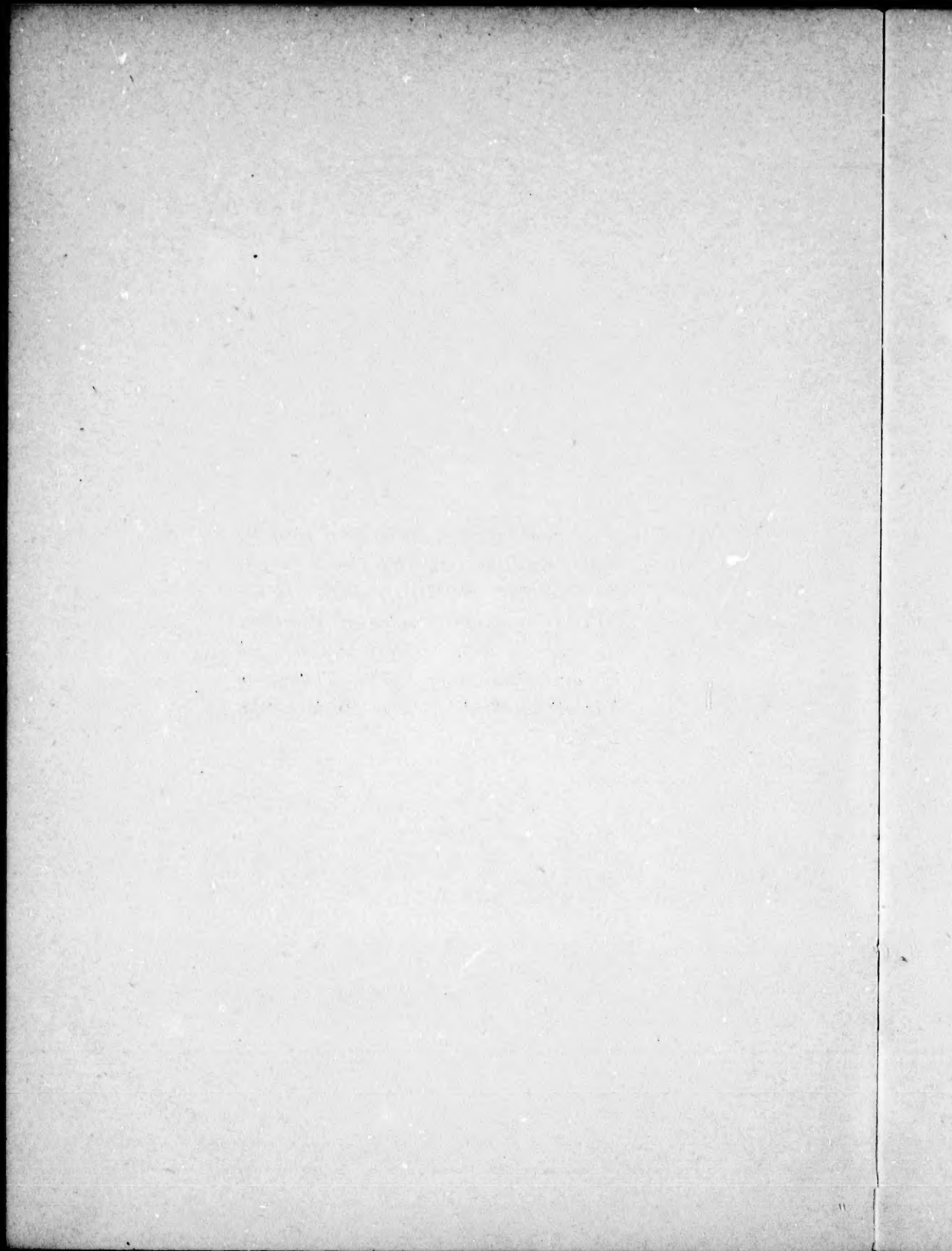
MANUAL TRAINING
IN
PUBLIC SCHOOLS

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*This is a revised report of an address given by
PROFESSOR ROBERTSON before
the PUBLIC SCHOOL BOARD OF
OTTAWA, on the evening of Thursday,
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by quotations from "The Theory of
Educational Sloyd"; George Philip & Son,
London.*



MANUAL TRAINING.

May I be permitted to say at once that if Manual Training were in any sense one of the "fads," which every now and then are pushed to the front as a sovereign remedy for the ills of humanity, in its childhood or mature age, I would not for one moment advocate or promote it.

Instead of that, it is the practical application of an educational movement which, during the last ten years particularly, has won an ever-widening place in the school systems of the foremost countries in Europe and also in the United States. It is already correcting some of the school influences which have been complained of alike by parents and teachers. It has been said that the schools, where book studies are the only or chief ones, turn the children from contentment with occupations in which bodily labour plays an important part, and also incline them to leave rural homes for cities, and clerical and professional pursuits.

While much has been said and written about the danger of over-educating the rural population and thereby leading them to leave the farms, I do not think it is possible to over-educate anybody. On the other hand it is easily possible and has been quite common to over-school boys and girls, as well as grown people. Perhaps one of the many causes which have helped to bring about a preference for clerical, professional and scholastic occupations, in those who have no natural fitness for them, and a corresponding distaste for manual and bodily labour, has been the too exclusively book and language studies of the common schools.

When a spirit of bare scholasticism pervades the primary schools, the high schools, the colleges and the universities, it is likely to leave the young men and women facing backwards, perhaps modestly proud of their knowledge of the history and theories of the past, but without ability to fill a man's or woman's place in the present. But when scholarship and practical and manual instruction, join hands in the schools to train the whole child, and not merely the memory and language faculties, the children will leave school facing aright, capable and happy in making the right things come to pass, at the right time and in the right way.

General Education.

As Commissioner of Agriculture I find that the efforts of the Department to help the farmers are chiefly intended to increase intelligence, to develop skill and to promote co-operation. These are all educational objects. However, I do not speak to-night in an official capacity; but as a private citizen. We are all interested in education. We have not come to a state of mind when the wrongs of child-life cease from troubling. Education begins with the child's life, and should continue of the right sort throughout. It seems unnecessary and wholly undesirable that the school period should be different from the years which go before and follow it, in its influence on the development of some of the most important faculties. Before the child goes to school, it is receiving most of its education, by its senses bringing it into conscious relationship with the material world around it, and by doing things with its hands. After the boy and girl leave school, they are required to do things with their hands, and to recognize and control their relationships to the things about them. Is it too much to expect that education in the school period, while imparting information and developing the general intelligence, should have cultivated their senses to be

keen and alert, and to report accurately and fully on what lies all round them? That prepares the mind for frequent experiences of "the joy of clear apprehension." None the less should their hands and eyes be trained to obey readily and skilfully the desires of the mind. Manual training is a means of developing mental power. These,—systematic training of the senses, of the hands and eyes, and of the mind—are some of the objects of practical and manual instruction.

As nearly all educational movements begin in cities and spread into the country districts, this also will doubtless follow the same course. That is one reason why the schools of the Capital are chosen for its introduction rather than those in rural districts. In the cities, as well as later on in the country parts, it will surely give many boys such a love for manual, industrial and productive labor for its own sake, that they will choose such occupations and delight in following them.

Not Trade Schools.

Manual and Practical Instruction (under the name of Schools of Industry) was advocated a century ago mainly as a means to fit the children of artizans to earn their own living successfully. These schools were more generally promoted in Germany than elsewhere and were not educationally a success. Manual and practical instruction is now recommended as an educational means for developing intellectual and moral qualities of high value, in all children, without particular regard to the occupations they are to follow afterwards. It is not technical education; although it gives, during the period of general education, the necessary preparation whereby anyone may derive the full measure of benefit from technical instruction at a later age.

Some Good Results.

The following extract from the Annual Report of the School Committee of Boston for 1892 shows some of the excellent results from manual instruction in the schools there. It is from the Head Master of the Agassiz School :—

"Manual training in the form of wood-work combined with drawing has now been a part of every pupil's education in the upper grades of the Agassiz School for three years. The time is too short to speak in a dogmatic manner of the effect of such training, but I think I can discern the following good results : First, a distinct gain in accuracy, not only the habit of doing work more accurately, but also a better appreciation and knowledge of what accuracy really means. * * * Second, this makes the pupil more thoughtful. Third, it makes him more attentive. Fourth, it makes him more observant. Fifth, the good effect of this training is quite noticeable in drawing and in arithmetic, especially in the subjects of mensuration and square root. Sixth, it has given certain boys an increased interest in school."

Royal Commission on the Subject.

In 1896 the Commissioners of National Education in Ireland requested the Lord Lieutenant to appoint a Commission to inquire and report with a view to determining how far, and in what form, manual and practical instruction should be included in the Educational System of the Primary Schools under the Board of National Education in Ireland. The following are extracts from the fourth and final report submitted on 25th June, 1898 :—

"In carrying out the task imposed upon us by Your Excellency's Commission of January 25, 1897, we have had ninety-three meetings, of which fifty-seven were sittings for the receiving of evidence. We have taken the evidence of 186 persons whom we considered qualified to give information on the matters submitted to us, and we have visited 119 schools, in most of which we have had an opportunity of seeing Manual and Practical instruction actually given."

* * * *

Note.—The Commissioners visited schools in Ireland, England, Scotland, Sweden and Denmark.

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"With a view to ascertain the existing facts with regard to Manual and Practical Instruction in Germany, France, Switzerland and Holland, we employed as our assistants to visit these countries, Messrs. Purser, Rolleston, Bonaparte Wyse, and Hughes-Dowling. The reports of these gentlemen will be found in Appendix B. We have had the advantage, too, of the assistance of Mr. M. E. Sadler, Director of Special Inquiries and Reports to the Committee of Council on Education, who was kind enough to furnish us with a memorandum on Manual Training for boys in Primary Schools in foreign countries. For our information regarding schools in the United States, we are indebted to the very complete and exhaustive Reports issued by the United States Bureau of Education. We have also had the benefit of the experience of one of our colleagues, Professor Fitzgerald, who took the occasion of a visit to America, in the autumn of last year, to see some of the primary schools in that country."

* * * *

Result of Inquiry.

"After careful consideration of the evidence laid before us, and of the facts which we have seen for ourselves, we now proceed to report, in accordance with your Excellency's Commission, how far, and in what form, Manual and Practical Instruction should be included in the system of primary education carried out by the National Education Board in Ireland. We may at once express our strong conviction that Manual and Practical Instruction ought to be introduced, as far as possible, into all schools where it does not at present exist, and that, in those schools where it does exist, it ought to be largely developed and extended. We are satisfied that such a change will not involve any detriment to the literary education of the pupils, while it will contribute largely to develop their faculties, to quicken their intelligence, and to fit them better for their work in life."

* * * *

Reasons.

"The considerations by which we have been led to the general conclusions above set out, will be fully discussed in the second part of this Report, under the several heads of Manual and Practical Instruction. But we think it will be for your Excellency's convenience, that the general summary of our conclusions should be here followed by a general summary of the grounds on which they are based."

Reasons Mainly Educational.

1. "First, then, there are reasons founded on educational principles. The present system, which consists largely in the study of books, is one-sided in its character; and it leaves some of the most useful faculties of the mind absolutely untrained. We think it important that children should be taught not merely to take in knowledge from books, but to observe with intelligence the material world around them; that they should be trained in habits of correct reasoning on the facts observed; and that they should even at school, acquire some skill in the use of hand and eye to execute the conceptions of the brain. Such a training we regard as valuable to all, but especially valuable to those whose lives are to be mainly devoted to industrial arts and occupations. The great bulk of the pupils attending primary schools under the National Board will have to earn their bread by the work of their hands; it is therefore important that they should be trained, from the beginning, to use their hands with dexterity and intelligence."

Reasons from Experience.

2. "Next, we have the practical experience of those schools in England, Scotland, and on the Continent of Europe, in which such a system as we recommend has been already introduced and tested. The evidence we have received on this point, is absolutely unanimous and, as we think, entirely conclusive. We have been told, over and over again, that the introduction of manual and practical training has contributed greatly to stimulate the intelligence of the pupils, to increase their interest in school work, and to make school life generally brighter and more pleasant. As a consequence the school attendance is improved; the children remain at school to a more advanced age; and much time is gained for the purpose of education.

"We inquired particularly whether the literary side of school studies—reading, writing, arithmetic, grammar, and geography had suffered any loss by the change; and the answer was uniform, that no such loss had been observed. In some cases, we were assured that the literary studies had been positively improved by the introduction of manual training. This result was accounted for, partly by the increased intelligence of the children, partly by the constant change and variety of their occupations,—many of the most useful exercises being only a kind of organized play, and partly by their increased interest in their work.

"We regard it also as a very significant testimony to the value of manual training, that wherever it has been once introduced, it has,

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with hardly an exception, been continued and extended. There has been practically no disposition to go back to the old system, which made primary education almost exclusively literary in its character; and after an experience extending over some years, there is a general consensus of managers of schools, inspectors, and parents, that the value of primary education has been greatly enhanced by the change."

A Basis Needed for Technical Education.

3. "Lastly, there is a consideration of a practical character, which seems to us deserving of no little weight. A strong desire exists throughout this country, and it is growing stronger every day, for the introduction of a general system of Technical Education. It is thought that a good system of Technical Education would contribute largely towards the development of arts and industries in Ireland; and in this opinion we entirely concur. But the present system of primary education is so one-sided in its character that it leaves the pupils quite unprepared for Technical Education. The clever boys trained in the National Schools, if they are disposed to seek for a higher education, may pass with advantage into Intermediate Schools of the kind now general in Ireland; but they are not fit to enter a Technical School, even if they had such a school at their doors. Now it seems to us the changes we recommend would go far to remedy this defect. The system of National Education, modified as we propose, would give an all-round training to the faculties of the children, and would thus lay a solid foundation for any system of higher education—literary, scientific, or technical—which might afterwards be found suitable to their talents and their circumstances."

* * * *

Conclusion.

"In presenting this report to your Excellency, we venture to express our conviction that, if our recommendations be adopted, the system of education carried out in the primary schools of Ireland can be made, within a few years, very thorough and complete. At present, no doubt, it is excellent in some respects; but in other respects it seems to us seriously deficient. Insisting too much, as it does, on the study of books, it leaves the faculty of observation and other important faculties comparatively uncultivated; and it neglects almost entirely that training of the hand and eye which would be so useful to the children in their after life, and which is now regarded both in England and on the Continent of Europe, as an element of great importance in primary education.

"The development of Manual and Practical Instruction, on the lines we have pointed out, will remedy these defects, and will not, we are satisfied, inflict any injury on the literary education which is now given. It will not disturb what is good in the present system, but only supply what is wanting. It will quicken the intelligence of the children, brighten the tone of school life, and make school-work generally more interesting and attractive. With the system of National Education modified as we propose, the children will be taught not by means of books only, but also by the more simple and effective agency of things; and they will be better prepared for their work in life, which, for the great bulk of them, must consist mainly of manual occupations.

"It is hardly necessary to say that the changes we have recommended cannot be carried out without a considerable expenditure of money. But we feel confident that the State, which so largely maintains and controls the system of National Education in Ireland will not hesitate to provide the necessary funds for improving that system, within reasonable limits. The progress of the people in wealth and material prosperity must largely depend on the education given in the primary schools; and to make that education thoroughly efficient and fit for its purpose is a task, we submit, which may well be undertaken, in the highest interests of the State, whatever the necessary cost may be."

* * * *

I have quoted freely from that Report. I am greatly indebted to it. I consider it peerless even among Parliamentary Blue Books for the thoroughness of its information. Its statements are clear as sunshine, strong as the words of wisdom, and convincing as truth itself.

The Governor-General of Canada.

His Excellency the Governor-General has expressed a keen interest in the welfare of the children of Canada; and the Countess of Minto, desirous of doing all she can to promote a good movement, is visiting schools in England, at present, to see and learn for herself the results of manual and practical instruction there,

What I Saw in London.

During the summer I had an opportunity to visit some of the primary schools in London in company with the School Board's organizer of manual instruction. Manual training in the primary schools was begun in London about 1886. As woodwork was not then recognized by the English Education Department as a subject to be taught in Elementary Schools the School Board was unable to use public monies to maintain it. Next year a grant of one thousand pounds was obtained from the Drapers' Company through the City and Guilds' Institute. A Joint Committee was formed whereby the funds were administered. The manual training was found so thoroughly useful and acceptable that it was speedily extended. In 1890 woodwork was recognized by the Education Department as a school subject. The School Board was thus enabled to expend its own funds upon this branch of school work, and in the same year money was provided by Parliament for grants for it from the Imperial Exchequer. Now there are about 150 manual training centres; and as nearly as I could learn, about 50,000 boys between the ages of nine and fourteen are receiving courses of instruction in wood-work, iron-work, brass-work or leather-work in the Public Board Schools of London.

At a typical school which I visited, a room was fitted with some forty benches, each provided with wood-working tools. There was also a supply of general tools for the room, in addition to the particular tools at each bench. One instructor and an assistant were sufficient for the forty boys. The course of instruction is a three years' one; and each boy gives half a day per week to it. Consequently the manual training room, in that instance, provided facilities for 400 boys, there being ten half days in each school week.

A series of articles called models are made by the boys. The things are articles of use, and are known to be such by the pupils. Each one is wholly made by the pupil. When the teacher needs to give practical demonstration, he gives it on another piece of wood, and not on the piece on which the boy is working. It is not much learning, but much interfering which makes anybody mad. The pupils make the objects by copying directly from the actual models. Later on they make drawings of the models from measurements, and make the objects from the drawings.

I observed that the children were deeply interested in their work. A casual glance of observation was all they gave to the visitors. A spirit of earnestness, self-reliance and careful perseverance seemed to pervade the whole school. The teacher told me that in accuracy of observation and accuracy of expression there was a noticeable improvement in the children after they had gone through the manual training course.

I found similar equipment and equal satisfaction reported in regard to the Board Schools in Liverpool.

Different from Apprentice Work.

The system of education is called English Sloyd. Sloyd is a Swedish word for "dexterity." Education^{al} Sloyd is an entirely different thing from carpentry.

The manual training room is not a workshop where operations are carried on with a view to the commercial value of the articles turned out. A workshop is a money-making institution, whereas a room for manual training—for Sloyd work—in connection with a school, is for the training and developing of the children, without regard to the intrinsic value of the work turned out, or to the length of time required to make any particular object. Sloyd work is really a series of exercises so arranged as to have educational results.

A floor area of about six hundred square feet is enough to accommodate about thirty pupils and one bench for each. A room 24 x 30 feet would be amply large ; and would provide also for the instructor's bench and for a group of pupils to watch what he was doing. Ten classes of thirty pupils each, or three hundred in all, could be passed through such a room in the week. The benches are of convenient height and size, and each one is fitted with a rack for the holding of tools, and also with tools. Some of them are also fitted with a simple device for the holding of the drawings, so that the work with the tools may proceed with the drawing in full view all the time. General class instruction with the aid of a blackboard, is given by some teachers in a fifteen minutes' talk, before the particular work of the half-day begins ; and instruction is given also to each of the pupils individually as the work at the benches proceeds.

Nature of the Models.

In some schools the first object to be made is a plant label. This involves (1) cutting to an exact length, (2) cutting the ends square by the use of a fine saw, (3) reducing to the proper thickness and width, and (4) making a taper with the same angles as those of the model. In other schools a small pointer is the first model ; and in others some object equally easily made. The first article is easily made ; the second introduces some slightly different use of a tool or the use of some different tool ; and so they proceed, arousing, training and gratifying the child as he makes all of each one himself.

It is to be remembered that the pupil makes each article wholly himself. At first he makes directly from the models. Later on he makes drawings from drawings of the models. Further on he makes his own drawings directly from the models. Then finally he is trained to make the articles from his own drawings of the models. The course may be arranged

on a plan of from thirty to sixty or more articles to be made by the pupil during the three years.

The following extract is from a statement by Most Rev. Dr. Walsh of Ireland, on the subject of Manual Training :—

"These objects are of no commercial value, at least they are not valued for their own sakes. So far as intrinsic value goes they might be destroyed as soon as they are made. As has been well said in one of the best expositions of the system, they are, in this respect, like the pages of the copy-book that the child fills in when learning to write. It is not the objects themselves, but the making of them that is looked to. It is the work of making them that constitutes the means to the end that is aimed at—that end being the cultivation, not only of manual dexterity but of accuracy, of carefulness in little things, of neatness, of self-reliance, of patience, of perseverance, of concentration of thought upon the work to be done, of love for honest, well-finished work—in a word, the training and cultivation of all those faculties and habits which it is of the highest importance to cultivate as a preparation for the business of life."

The following are a few of the models which have been used. Round Flower Stick; Rectangular Flower Stick; Key Label; Pen Rest; Flower Pot Cross; Metre Measure; Flat Ruler; Lamp Wall Stand; Set Square; Bracket; Picture Frame; Book Shelves. Some of the last mentioned ones are from the High School Series.

The lectures of Mr. Otto Salomon, the renowned Director of the Seminarium for teachers at Nääs, Sweden, furnished valuable suggestions on the choice of models and on the arrangement of the series of models. An authorized edition of those lectures is published under the name of "The Theory of Educational Sloyd."* To it I am indebted for the following :

GENERAL PRINCIPLES RELATING TO THE SERIES OF MODELS.

A.—Ten points on the CHOICE of models.

(1.) *All objects of luxury—knick-knacks—should be excluded.* From an educational point of view, we must first teach what is necessary; secondly, what is useful; thirdly, if time permits, what is agreeable. These terms are, however, relative.

*George Philip & Son, London.

What is necessary to one person may be useful to another, and what may be useful to one, agreeable to another. What is a luxury in one age or country, is not necessarily so at another time or place. What is a luxury to a poor man may be a necessity to a rich.

In regard to nature the terms are more absolute. What is necessary to one is necessary to all. It is necessary to eat food; it is useful to eat food sufficient, and of good quality; it is agreeable to have it well cooked and prepared.

(2.) *All Models should be serviceable in the house.*

If this is to be the case, the models will vary to some extent in different schools. Not only will the models be different in different countries, but in different districts of the same country; *e.g.*, in country schools it would not be wise to teach the manufacture of objects only useful in towns. It would be preferable to substitute models which may be used in agriculture; but in substituting other models, care must be taken not to disarrange a carefully graduated series of exercises. So, too, if the school be near a lake, objects concerning boats and fishing should receive attention. The general principle by which we should be guided is: that the series of models made in the school should give the best expression to objects needed at home or in the district.

(3.) *They should be capable of being finished by the children without help.* Hence models should not be a *part* merely of something, but the *whole*.

For this reason it has been found necessary to exclude many things which would otherwise have made useful models.

(4.) *The models should be of wood, and only wood should be worked in, as a rule.* To this rule there are one or two exceptions, as the cloak suspender, the clothes rack, and bucket; and these have been inserted because teachers in the country districts of Sweden cannot buy them, but there is no reason why they should be retained in an English series.

When it is said that the models must be made of wood, it is not implied that there is any objection to the purchase of iron fittings.

(5.) *The objects should not be polished or stained.* In the first place, because children cannot polish well. Models are frequently spoiled by it.

Many juniors cannot polish well, *i.e.*, French polish.

In the second place, it is important that children should not be taught to think too much of the surface.

It is not so important that a thing look well, as that it be done well.

Polishing and wood-carving exert a morally bad influence, if done to cover up bad or indifferent work. It is a degradation of the polisher's and carver's arts to use them for such a purpose.

(6.) *The objects made should be such as to require as little wood as possible.*

Some models require much wood, but if the same exercises can be furnished by smaller objects equally useful, then these should be preferred.

The value of the object must be in the *child's work*, and not in the amount of material used. This recommendation has a further value, inasmuch as it teaches the child to use small means in effecting ends. Children should be trained to be economical by taking care of those pieces of wood for smaller objects which they have spoiled in making larger ones.

(7.) *The children should be taught to work in harder and softer kinds of wood—but not in the hardest or the softest.*

(8.) *Turnery and carving should be used very little.*

(9.) *Objects chosen should be such as will develop the sense of form.*

(10.) *All the exercises (embraced by the particular kind of Sloyd in question) which the child is capable of making, should be properly graduated and included in the series in due proportions.*

B.—EIGHT PRINCIPLES ON THE ARRANGEMENT OF THE SERIES OF MODELS.

(1.) *The series should proceed from the easier to the more difficult, and from the simpler to the more complex; which expressions, as we have seen, are not identical in meaning.*

(2.) *A refreshing variety must be afforded.*

(3.) *In the early part of the series, the models should be capable of being quickly and easily made, and should be so progressively arranged that, later on, the objects arrived at should require more time and skill, and yet be capable of being done without help.*

Children expect to have results as quickly as possible. They have not sufficient patience and foresight to derive any benefit or satisfaction from results which are expected to crown their labours in a few days or months. For this reason the objects further on in the series should take more time, in order to cultivate patience and foresight.

(4.) *In the production of the early models, few tools should be required, but as the series progress, new tools and manipulations should be introduced.*

(5) *That every model should be so placed in the series, that the necessary qualifications for doing it exactly are found in the child, who therefore does not need the help of the teacher. It should not relatively be more difficult for a child to do one model than another. A model may be more complex, but this does not imply an increase of difficulty; for the child—when it reaches it—has acquired greater skill. A person who has used one tool will use a second better, although it be of another kind; he will use a centre bit better for having previously worked with a knife.*

(6.) The models must be so arranged that the pupils can always make *not only a serviceable, but an exact copy*. The degree of exactness is a very important feature. It is easy to make a table if exactness be not required.

(7.) *That the knife—as the fundamental tool—be used frequently especially at the beginning.*

By the fundamental tool, we understand that tool with which the child is most acquainted and can most easily use, hence we begin with it; secondly, that tool which cultivates the greatest amount of manual dexterity; and thirdly, the tool which in after life will be most useful to the child, and most ready to hand. These advantages the Sloyd knife possesses. We must not be understood to imply that this tool is the one most used throughout the series of models.

(8.) *That generally in the early models the softest wood should not be used. It is more difficult to use a knife on a very soft wood than on a wood not so soft; so that it is advisable to avoid using the softest kinds of pine and fir."*

Schools in Canada.

We all know schools have a two-fold use; the imparting of knowledge, and the drawing out of the natural powers and capacity of the pupils; but it is the teacher—the human element in the school and in the system—that counts for most. The personal qualities of the teacher are the prime power outside the pupil which make for educational culture—that is for growth by a leading out of the powers of the child. The main endeavour should be to lead out the mind by nourishing ideas, rather than to cram in a knowledge of unprofitable facts.

The object of education, the real controlling influence which shapes its direction, depends on the ideals of the people. When the mothers want to see their sons ministers, and doctors, and lawyers and such, unconsciously perhaps but certainly, the schools will be turned that way. What is it desired that the children shall be when they grow up? On that question hinges the educational system. If the ideal be riches and easy life, or luxury or ostentation, it will be pernicious. If the supreme desire be that the children, and the grown people, shall be happy and capable, in the sphere of life in which they are to live, then the education and educational processes should be directed to attain these ends.

Power to Overcome Obstacles.

Manual training develops in children habits of industry and leads them to thoughtfully adjust their acts to desired ends. That of itself is of great educational value. It helps to keep out of later life whimsical and capricious conduct. It brings about the mental habit of appreciating good work for its own sake; and is quite different from that sort of education which consists in informing the pupils about the facts within a definite area of knowledge in order that they may be able to pass examinations on the subjects included within it. The so-called dull boys, who are not quick at book-studies, have in many cases been found to show great aptness in the manual training part of education. It prevents them from being discouraged with school life, and from feeling any sense of inferiority to the quick children. It gives them self-reliance, hopefulness and courage, all of which react on their mental and physical faculties. It also is a soothing and strengthening corrective to the quick and excitable children who become over-anxious about examinations on book studies.

The glow of satisfaction—akin to the joy of triumph—from having done something well, has a stimulating effect.

Is it different from what is revealed by the sacred historian when he wrote: "And God saw everything that he had made, and behold it was very good"? Indeed one can hear the echo, if you will, of that Divine satisfaction in the murmur of the waves, in the rustle of the leaves, in the soft, the almost silent cadencies of the ripening grain, in the singing of the birds, in the trees of the forest clapping their hands, and in the lullaby of the sunshine and breezes to the cattle on a thousand hills. It is a good thing to let every boy and girl become partaker of this Divine joy in their own work. The reaction gives mental power, power to overcome obstacles; and the power to overcome obstacles is perhaps the most desirable mental quality, inherited or acquired.

The Kindergarten.

Kindergarten takes its name from two German words signifying a children's garden. It has come to indicate the method of teaching and training, and also the place where these are carried on. A gardener does not furnish plants with leaves and fruit to be attached to them. He does everything necessary that they may grow. Since the order of mental growth is Desire, Action, Sensation, Thought, the desire of the child must be quickened towards an action or series of actions, having an educational value. Thus mental growth begins and thus mental power is gained. The spirit and the principles of true kindergarten teaching should continue throughout the whole educational course,—even if that lasts during the allotted three score years and ten.

Book Studies Alone.

As now supplemented, the literary side of school studies has been greatly improved. But everybody says too much of the present system is based on the study of books; and too

much time is given to memorizing symbols and names. That is one-sided; and renders children more capable of answering questions and explaining methods than of enjoying themselves in doing delightful beneficial work. They are able to answer all sorts of questions; but it is not so conducive to happiness to be able to explain the universe, as to be able to do well one's work in it with unselfishness.

The school studies have been devoted too exclusively to the falsely so-called intellectual life. A child is one and indivisible, a being with physical, mental and moral qualities and powers; and surely a school course is deficient which does not provide as fully as is practicable for the development and training of faculties of the body, mind and soul.

Manual Training as a Corrective.

Over-feeding of subjects is a common cause of mental dyspepsia,—a most uncomfortable and unfortunate state of mind. There is a difference between informational subjects, and an educational process to train the useful faculties of the *mind* and *body*; and in the process of education the development and training of the bodily as well as the mental faculties are to be aimed at.

The training of the child is the main object and not the mere memorizing of information. Wherever it is necessary to lighten the school course, to leave room and time for real training exercises, might not some of the informational subjects be let go? They won't be missed, except as the letting go of an unnecessary brake would be missed going up hill.

The introduction of manual training, which is really hand and eye training (and there is already a little of that in writing and drawing) should not be in the nature of adding a new subject or study to the already over-burdened school course. The aim should not be a formal literary education

plus manual education; but education of which manual training is an integral and highly valuable part. The object and order should be to train the child with system and care to observe, to interpret, to construct and to describe. That is the purpose of manual training. It is educational hand-work, not trade hand-work.

Outline of Its History.

Only the barest reference can be made here to the history of Educational Sloyd. In fact I am not sufficiently acquainted with it to make more than mention of a few matters. Perhaps the movement has had its widest extension and best application in the elementary schools of Sweden. The following are quotations from "The Theory of Educational Sloyd," already referred to:—

"The Sloyd movement in Sweden had begun in the late sixties and early seventies. It was first of economical rather than educational significance, *i.e.*, it was a movement for home industries, which, it was soon seen, must begin in the school if it was to have any lasting effect. Sloyd schools were started in different neighborhoods by private individuals, some of them close at hand in the lan or county of Alfsborg, where Count Sparre, the chief of the county, had formed a Sloyd Union. Struck by the new movement, Herr Abrahamson, in February, 1872, opened a work-school for boys at Nääs, and two years later a similar one for girls, with his nephew Mr. Salomon for director."

"In 1874 Herr Salomon became Inspector of Sloyd Schools for the middle district of Alfsborg lan, a post which he held for several years."

"To meet the demand for Sloyd teachers, Messrs. Abrahamson and Salomon, in 1874, opened a training department in connection with their school, this being the first attempt of the kind."

"The question now began to be looked upon from an educational rather than an economical point of view."

"One thing was already quite clear. The teacher only could make Sloyd educationally useful, and so he strove henceforth to make the Sloyd School and the Folk School one. From 1878, therefore, he began to take ordinary teachers from his own lan in 5-or-6-week holiday courses in Sloyd, whilst still continuing the work of the Seminaryon

the same plan which he had begun four years before. But in 1882 came a thorough change. The twelve month courses ceased, and the short courses were extended, first to all Sweden, and then to teachers from abroad."

"At the same time, too, all other forms of Sloyd were dropped in favour of the one that was found the most useful educationally, viz, Wood Sloyd. The concentration of attention upon this one allowed of a development of it for educational purposes which it can scarcely be said to have received elsewhere. And there can be no doubt, too, that it is this concentration which has been a powerful help in securing the introduction of Sloyd into the 1,900 elementary schools in which it is now taught in Sweden."

"Nåås is a good Sloyd school, and much besides. It is the meeting place of leading teachers of all degrees and all nationalities, for common work, and for the interchange of ideas. Professors, inspectors, secondary and elementary teachers, women as well as men, there meet on common ground as comrades. It fulfils, more than any other institution that could easily be named, the ideal we are aiming at in England in the Teachers' Guild. And this is due to the earnest co-operation, for the last 20 years, of three men, each of whom in his own sphere has done his very best. Herr Abrahamson, has made a noble use of his wealth in founding the Seminary, and providing for its continued existence; as a kindly host, too, he makes his interest and presence felt in all that concerns the common work and the common pleasure. His nephew provides the ideas and the direction; whilst Alfred Johansson is mainly responsible for the teaching in bench work, which occupies such a large part of the day. But the chief burden falls on director Salomon."

Thus Sweden and in a measure all Europe are indebted to these two benefactors, Messrs. Abrahamson and Salomon, for the wise and unselfish use of wealth and personal ability.

"The last thirty or forty years may be taken as the period within which the movement now in progress for the introduction into primary schools of a system of manual exercises arranged with a view to their general educational advantages, had its beginning."

"Within the present century, Finland was the first country to give a recognised place in the curriculum of the primary school to woodwork and other manual exercises. That it did so was in great measure due to the influence of Uno Cygnæus (1801-1888.) His project for the re-organ-

*See foot-note on page 23.

ization of the primary schools of that country was carried into effect during the years 1858-1866. Cygnæus laid great stress on the general educational discipline given by manual exercises, as distinct from the economic advantage to be derived from the early acquisition of manual skill. In 1866, instruction in some branch of manual work, such as woodwork, basket work, tin work, or iron work, was made compulsory in the Training Colleges for male teachers, and in all primary schools for boys in country districts."

"In Norway this branch of school-work was first recognized in the official programme in 1860. It is only within recent years that much attention has been given to the usefulness of a system of manual exercises as a branch of general primary education. Since 1891 it has been compulsory in all Norwegian Training Colleges and town schools."

"In Germany, the false start originally made by the establishment of the Schools of Industry naturally put a serious obstacle in the way of the introduction of woodwork and other manual exercises as a part of primary education. But now, throughout Germany, there is in progress a movement for this purpose, thoroughly inspired by the educational idea, and this movement is steadily gaining ground."

"Until very recently, the movement in Germany had to depend exclusively on private effort. Its chief support came from an energetic Association, the German Association for Manual Work for Boys. A great number of the best teachers of this branch of school-work in Germany have been trained in a Training College established by this Association at Leipzig, under the directorship of Dr. Goetze, who is one of the leaders of the movement throughout Germany. This College is open to foreign students, and has been largely attended by them."

"The movement in Germany has at length won its way so far as to have its claim recognized for State-aid to the work it has undertaken to promote. The governments of Prussia, Saxony, and Baden, now make state contributions in aid of this branch of school-work."*

In England and Scotland, gifts of money by private individuals and guilds enabled educational reformers to give the system a fair trial at many centres. During the decade now closing it has been taken up and extended by School Boards

* From memorandum on Manual Training for boys in Primary Schools in foreign countries, by M. E. Sadler, Esq., Director of Special Enquiries and Reports to the Committee of Council on Education England.

with the co-operation and financial support of the Department of Education.

In the United States it is making rapid headway. In most places where it has been introduced, the generosity of private individuals gave it a start; and it was then taken up and made part of the public school system. I visited a school in Boston lately where I was informed this movement had its beginning in 1890. It is an endowed school and the trustees (I am not sure of the correct designation), used part of the revenue to establish and maintain manual training. The report of the Committee on Manual Training intimates that the expenses of teachers at other schools in Boston for several years were paid by "Mrs. Hemenway and Mrs. Shaw, whose names have become 'household words' in Boston." It is now part of the educational system under the school authorities; and this year I learned that there were 27 manual training centres in the public schools of the city.

The Macdonald Sloyd School Fund.

In this movement the desire is to aim only at what is feasible and sure to be practicable. By the generosity of a friend of education in Canada, the plan proposed for the introduction and extension of manual and practical instruction in primary schools in Canada is as follows:

Everybody has heard of SIR WILLIAM C. MACDONALD, OF MONTREAL, and his splendid benefactions to the cause of higher education in Canada. It is reported that his gifts to McGill University exceed two and a half millions of dollars. He is keenly interested in primary education as well as in University training and extension. He now offers to pay for the equipment required for educational manual training in one place in every province in the Dominion; and also to meet the expenses of qualified teachers, and of maintenance for three years in all those places.

Such in brief outline is the proposal I have the supreme satisfaction and happiness of announcing. It must result in immediate, lasting, far-reaching benefit to the boys of Canada; and I am sure all will join in the earnest hope that the wisely patriotic and generous benefactor, may long live, gladdened by knowing that the children and the grown people of Canada rise up and call him Blessed.

